

CLAIMS

1. Cast part with high creep resistance, made of an alloy with composition (% by weight):

Si: 5 - 11

Fe < 0.6

5 Mg: 0.15 - 0.6

Cu: 0.3 - 1.5

Ti: 0.05 - 0.25

Zr: 0.05 - 0.25

Mn < 0.4

10 Zn < 0.3

Ni < 0.4

other elements < 0.10 each and 0.30 total, remainder aluminium.

2. Part according to claim 1, characterised in that its silicon content is between 6.5 and 7.5%.

15 3. Part according to either claim 1 or 2, characterised in that its iron content is less than 0.3%.

4. Part according to one of claims 1 to 3, characterised in that its copper content is between 0.4 and 0.7%.

20 5. Part according to one of claims 1 to 4, characterised in that its magnesium content is between 0.25 and 0.5%.

6. Part according to one of claims 1 to 4, characterised in that the contents of magnesium and copper in % are such that $0.3\text{Cu} + 0.18 < \text{Mg} < 0.6$.

7. Part according to one of claims 1 to 6, characterised in that its titanium content is between 0.08 and 0.20%.

25 8. Part according to one of claims 1 to 7, characterised in that its zirconium content is between 0.12 and 0.18%.

9. Part according to one of claims 1 to 8, characterised in that its manganese content is between 0.1 and 0.3%.

10. Part according to one of claims 1 to 9, characterised in that its zinc content is less than 0.1%.

11. Part according to one of claims 1 to 10, characterised in that its nickel content is less than 0.1%.

5 12. Part according to one of claims 1 to 11, characterised in that it is solution heat treated, quenched and tempered to T6 or T7.

13. Part according to one of claims 1 to 12, characterised in that it is a cylinder head or a crankcase of an automobile or aircraft engine.